

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Roland Contreras, et al.	Examiner:	Quang Nguyen
Serial No.:	10/672,484	Art Unit:	1633
Filed:	September 25, 2003	Docket:	13748Z
For:	PROTEIN GLYCOSYLATION MODIFICATION IN METHYLOTROPHIC YEAST	Dated:	July 8, 2009

Confirmation No.: 8325

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

In accordance with 37 C.F.R. §§ 1.97 and 1.98, it is requested that the following references, which are also listed on the attached Form PTO-1449, be made of record in the above-identified case.

CERTIFICATE OF ELECTRONIC FILING

I hereby certify that this correspondence is being deposited with the United States Patent & Trademark Office via Electronic Filing through the United States Patent and Trademark Office e-business website, on the date shown below.

Dated: July 8, 2009


Xiaochun Zhu

1. Nakayama Ken-ichi et al., "*OCH1* encodes a novel membrane bound mannosyltransferase: outer chain elongation of asparagines-linked oligosaccharides", *The EMBO Journal* 11(7): 2511-2519 (1992);
2. European Patent Publication Number EP 1 211 310 A1, published June 5, 2002;
3. PCT International Publication Number WO 02/00879 A2, published January 3, 2002;
4. Kniskern P. J. et al., "Characterization and evaluation of a recombinant hepatitis B vaccine expressed in yeast defective for *N*-linked Hyperglycosylation", *Vaccine* 12(11): 1021-1025 (1994);
5. Lehle L. et al., "Glycoprotein biosynthesis in *Saccharomyces cerevisiae*: *ngd29*, an *N*-glycosylation mutant allelic to *och1* having a defect in the initiation of outer chain formation", *FEBS Letters* 370: 41-45 (1995);
6. Yoko-o T. et al., "*Schizosaccharomyces pombe och1*⁺ encodes α -1, 6-mannosyltransferase that is involved in outer chain elongation of *N*-linked oligosaccharides", *FEBS Letters* 489: 75-80 (2001);
7. Cregg J. M. et al., "High-Level Expression And Efficient Assembly Of Hepatitis B Surface Antigen In The Methylophilic Yeast, *Pichia Pastoris*", *Biotechnology* 5: 479-485 (1987);
8. PCT International Publication Number WO 91/05057, published April 18, 1991;
9. Lai A. et al., "Substrate specificities of recombinant murine Golgi α 1,2-mannosidases IA and IB and comparison with endoplasmic reticulum and Golgi processing α 1,2-mannosidases", *Glycobiology* 8(10): 981-995 (1998);
10. Tremblay L. O. et al., "Cloning and expression of a specific human α 1,2-mannosidase that trims Man₉GlcNAc₂ to Man₈GlcNAc₂ isomer B during *N*-glycan biosynthesis", *Glycobiology* 9(10): 1073-1078 (1999);

11. Gonzalez D. S. et al., "Identification, Expression, and Characterization of a cDNA Encoding Human Endoplasmic Reticulum Mannosidase I, the Enzyme That Catalyzes the First Mannose Trimming Step in Mammalian Asn-linked Oligosaccharide Biosynthesis", *The Journal of Biological Chemistry* 274(30): 21375-21386 (1999);
12. PCT International Publication Number WO 96/21038, published July 11, 1996;
13. European Patent Publication Number EP 0 314 096 A2, published May 3, 1989; and
14. Callewaert N. et al., "Use of HDEL-tagged *Trichoderma reesei* mannosyl oligosaccharide α 1,2- α -D-mannosidase for N-glycan engineering in *Pichia pastoris*", *FEBS Letters* 503: 173-178 (2001).

Reference numbers 1-14 were cited in an extended European Search Report, dated April 8, 2009 received from the European Patent Office. A copy of the Search Report is enclosed. The relevance of the above-identified references has been described in the Search Report. It is further respectfully submitted that the other references cited in the Search Report, namely, Chiba Yasunori et al. (1998), Nakanishi-Shindo et al. (1993), Martinet W. et al. (1998), Maras M. et al. (2000) and Trombetta E. S. et al. (1996) were previously submitted in Applicants' Information Disclosure Statement dated September 25, 2003, therefore copies are not provided.

Applicants are submitting copies of reference numbers 1-14 required under 37 C.F.R. § 1.98(a)(2)(i) and (ii).

The undersigned attorney hereby states that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.

Consideration of this Information Disclosure Statement is respectfully requested, since the art provided may be material to the examination of the present application as defined under 37 C.F.R. §1.56.

Inasmuch as this Information Disclosure Statement is being submitted in accordance with the schedule set out in 37 C.F.R. § 1.97(c)(e), no fee is required.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'XZhu', with a long horizontal flourish extending to the right.

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